

CALIFORNIA'S HEALTH

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A Century of Public Health in Hawaii

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The story of public health in Hawaii is the story of men and laws and epidemics. It is an account of the perseverance of people like Dr. T. C. B. Rooke, English physician and foster father of Queen Emma, to have established a board of health and health regulations. It is the acts of the Privy Council during the reign of Kamehameha III granting powers to royal health commissioners to maintain quarantine at the ports, and to carry on sanitary inspection. And it is the laws passed by legislatures from 1851 to the present assigning powers to the board of health. It is the history of smallpox epidemics in the 1850's and 60's, of cholera and plague in the 1890's, of the rise of leprosy between these two afflictions, and the continual struggle to achieve sanitary environments. The recounter is tempted first to assume the role of the biographer, then that of a legal essayist, and finally of a chronicler of the waves of disease that intermittently compelled the attention of those responsible for the welfare of these islands.

Documents of Progress

Documents carefully preserved in the public archives reveal the often faltering but certain progress toward achievement of the provisions to assure the health of an island community situated prominently in the shipping lanes of the Pacific, from the days of

From its strategic position on the trade lanes of the Pacific, Hawaii has long recognized the importance of maintaining strong public health defenses against disease invasion. A century ago, and some 20 years before California created its Board of Health, our western neighbor, then an island kingdom, formed a Board of Health and took specific measures to meet public health needs. Their century of progress, recounted here, has special interest for Californians, because Hawaii's efforts have, in effect, helped guard our shores against the importation of disease from Asia and the islands of the Pacific. Too, the history carries an intrinsic interest as an account of a progressive people in building for themselves a strong and efficient public health organization.

explorers and whaling vessels to the era of strato-cruisers.

The first of these documents, a printed broadside six and a half by eight inches, dated August 1, 1836, at Wai-kiki, was addressed to the Pilot at Honolulu, and signed by Kinau and Auhea, wives of the late Kamehameha II, and Paki, his father-in-law, a trusted advisor of Kamehameha III. It said—

To the Pilot at Honolulu:

You are hereby directed, previous to boarding any vessel from the North West Coast of America, and other vessels generally, to ascertain whether there has been any case of SMALLPOX, or other pestilent disease, on board such vessel, for the previous forty-two days. If there should have been, you are hereby forbidden to go on board such vessel, or to suffer any of your boat's crew to go on board, but to conduct such vessel to a convenient anchorage, and direct the Master to hoist a yellow flag (with which you will be furnished by us) at the main, and immediately give information to the constituted authorities.

Any persons neglecting these regulations will be severely punished: and vessels not conforming to them, shall be driven from our shores.

First Boards of Health

The next document of extraordinary significance, promulgated May 29, 1839, by King Kamehameha III and his chiefs, ordered the several governors of the



islands to appoint the first boards of health for the purpose of inspection of all ships coming into Hawaiian harbors from foreign ports. Smallpox having been "clearly ascertained to prevail" on board one or more ships cruising in the Pacific Ocean which might be expected to visit the Sandwich Islands, and disease having been understood to prevail at that time in ports on the western coast of America, frequently visited by ships on their way to the Sandwich Islands, these boards were to appoint health officers who were to inspect each ship entering the harbor and "to enact such laws and regulations as may be necessary to protect the health of their several places." This action by the government is considered by many as the anniversary date of the Board of Health of the Territory of Hawaii, although a letter addressed to the King 11 years later indicates that the pronouncement issued in the face of impending danger may not have been carried out when the epidemic failed to materialize.

In 1850 a new danger threatened the ports of the Sandwich Islands. For over a year, the *Polynesian*, Honolulu weekly, had been printing news items about the spread of cholera over the earth, usually managing to include either the effective work against it by a board of health or the great ravages that had resulted because of the absence of such a board. The November 23, 1850, edition printed under the headline—

"CHOLERA IN SAN FRANCISCO"—This terrible scourge has at length reached the borders of the Pacific and we know of no reason why it may not be brought to these islands where its advent would be the signal for a degree of mortality hitherto, we fear, unknown here, although the nation has been decimated by measles and whooping cough, a vigilant inspection ought to be made of all vessels arriving from California and the strictest quarantine regulations enforced in case the disease is on board. A board of health should be organized at once. * * *

The same paper ran a four-column report on the history of cholera made to the King by R. C. Wyllie, Minister of Foreign Relations. It was Mr. Wyllie who wrote Dr. T. C. B. Rooke, English physician in Honolulu, that the King and Privy Council requested that he and other physicians "should concert together as a board of health and with the least possible delay, suggest all sanitary regulation that they would recommend for the health of the town—also all nuisances that, in their opinion ought to be removed."

Apparently Dr. Rooke and his associates did indeed act with the "least possible delay" for just 14 days later on December 13, 1850,* the King and Privy Council passed two ordinances, one establishing and appoint-

ing a board of health, and the other setting up health regulations which the board was to administer. The first ordinance read:

"ROYAL ORDINANCE ESTABLISHING A BOARD OF HEALTH.

"Be it known to all whom it may concern that We, by and with the advice of our Privy Council, hereby empower and authorize Dr. T. C. B. Rooke, Drs. George A. Lathrop, Benjamin F. Hardy, G. W. Hunter, C. Hoffman, M. D., Richard Hill Smyth, and W. Newcomb to act as a Board of Health (four of them to be a quorum), for the good of the inhabitants of Honolulu, and we hereby request and authorize them to communicate respecting the same, with the Governor of our Island of Oahu, and to point out to him everything that in their opinion ought to be done, or undone, removed, or procured, for the preservation and cure of contagious, epidemic or other diseases, and also to report daily to him, all cases of such diseases, and more especially of cholera, as may have occurred to each of them on the day preceding.

"Done in our Privy Council, this 13th day of December, 1850. Keoni Ana"

KAMEHAMEHA

The second ordinance included regulations concerning examining residences, places, environs reported to have nuisances deleterious to public health; receiving in writing reports from every physician of cases of malignant disease and from families and boarding houses and from masters of any vessels in Honolulu; providing care for such cases in hospitals by physicians paid by the board; continued enforcement of the port quarantine; designating burial places; and making reports of communicable disease incidence monthly unless there were epidemics, in which case the reports were to be made weekly. Of significance was the provision that the board was to have the right to make further regulations to protect the health of the community, a privilege the board still holds with the provision added in 1905 that such regulations must have the approval of the governor.

Legislature Confirms Board of Health

On May 18, 1851,* these ordinances were confirmed by the legislature and an appropriation of \$10,000 for health was placed in the budget.†

Whether the precautions provided for in these acts or other factors were the reason, cholera did not invade Hawaii at that time. Within less than three years, however, smallpox swept the islands. Out of a population of 19,126 persons on Oahu, there were 9,082 cases and 5,748 deaths.

* Resolution 4, Privy Council Minutes in R. C. Wyllie's handwriting. Resolution 6, passed by Privy Council December 16, 1850, charged the Minister of Interior to carry this ordinance into effect.

* Printed Report of the Royal Commissioners of Health, March 20, 1854.

† Reports of the Minister of Finance, 1846-1888, December 31, 1852.

Compulsory Vaccination

In December, 1853, the commissioners of health were asked to frame an act for compulsory vaccination, which they, in their experience, would recommend for the future protection of the lives of the King's subjects. The law making vaccination compulsory was passed by the Legislature at its 1854 session. Minutes of the Privy Council state that "a zinc-case containing genuine vaccine lymph" for use in Hawaii was received from the General Board of Health in London on February 20, 1854. Vaccinating officers for each major island were appointed the following August with \$800 appropriated for those on Hawaii, Maui, and Oahu, and \$400 to the officer on Kauai. In 1860, \$1,500 was appropriated for vaccines and in 1862, \$2,000. That year also, the appropriation made to the health commission was \$600. In 1866 it was raised to \$30,000.

In spite of the attempt to control smallpox by vaccination and quarantine, a second epidemic broke out in 1861. Complicating the problem was the large number of infected Chinese immigrants constantly arriving. More than 5,000 people were maintained in quarantine and over 1,000 guards were employed to care for them and maintain their isolation. This time there were 782 cases and 282 deaths.

As the population became more stable, however, the results of widespread vaccination were realized. In 1949 there had not been a case of smallpox in the islands for 36 years.

Hospitals and Settlement

The story of Hansen's disease in Hawaii is one that began more than a century ago and one that in recent years is progressing toward a happy ending. From 1866, when Kalaupapa Settlement on the island of Molokai was first established as a place of exile, to 1949, when Hale Mohalu was opened as a treatment hospital welcoming visitors and providing out-patient care, science has been advancing toward the prevention and cure of this disease. Rehabilitation needs now command attention.

The exact date when Hansen's disease first appeared in the Hawaiian Islands has not been determined. Reference is made to specific persons who had the disease in the 1830's and 40's—to one Ahia in particular—who attracted much attention in 1840 because he was a chief in the bodyguard of King Kamehameha IV. Dr. D. D. Baldwin's report on a case of Hansen's disease at Lahaina in 1857, however, is the first mention made by the Board of Health of its existence in the kingdom.

Hoping to prevent further spread of the disease, the Legislature of the kingdom in 1865 enacted a segregation law and in 1866 established a colony or settlement at Kalaupapa to provide this isolation and a hospital at Kalihi in Honolulu for early cases. The

administration of the program was carried on by the Board of Health from then until 1931 when the Board of Hospitals and Settlement was given jurisdiction of it. The 1949 Legislature abolished this board and returned the administration of the Hansen's disease program to the Board of Health effective July 1, 1949.

All new cases of Hansen's disease are now treated at Hale Mohalu, a modern hospital on the island of Oahu not far from Honolulu. Many cases are also being transferred from Kalaupapa Settlement, but all patients wishing to remain at Kalaupapa are being permitted to do so.

A school for children is maintained at Hale Mohalu. Last year 12 students were enrolled in grades six through eleven. Adult education classes and occupational therapy classes were also started this year.

With the gradual disappearance of the mystery, superstitions, and unfounded fears regarding the disease, and the new developments in the treatment of it, the public is beginning to realize that Hansen's disease is a chronic illness difficult to contract and not so dangerous from a public health standpoint as many other infectious diseases.

The new sulfone drugs (five are in use at the present time) used in the treatment of the disease seem to be effecting cures and clearing up lesions in many cases. It is hoped that the near future may bring forth even more efficient drugs of the sulfone family.

These drugs have not only changed a seemingly incurable disease to one that promises to be highly curable, but have also brought about a method of treatment similar to that used for other infectious diseases.

Case finding, especially directed to more susceptible groups or families, is a first step toward early diagnosis and treatment of Hansen's disease. Vocational rehabilitation is a final step in the public health management of it. Hawaii is now making progress in all three phases of the program.

Rodent Control

Complete eradication of bubonic plague has not been achieved since the first epidemic in 1899. The latest known case of human bubonic plague occurred on Hawaii, October 31, 1949, but plague infected rats were found in 1950. Typhus fever, another rat-borne disease, was first reported in 1934 when six cases were diagnosed. This number rose steadily until 1944, when there were 186 cases reported. It was partly in an effort to stem this rising typhus incidence that a separate bureau of rodent control was set up in August, 1943, with a director responsible for bringing together all measures for the suppression of rats which contributed to the spread of both plague and typhus. By the year 1949-50, reported typhus cases were down to 18 and only one

human plague case had been reported in four and a half years.

Mosquito Control

Mosquito control was a recognized problem in Hawaii in 1904, according to the minutes of the Board of Health. Seven years later the Bureau of Sanitation employed men whose work for eight years was exclusively in mosquito control. In 1930, the Public Health Committee of the Honolulu Chamber of Commerce took up the program, along with one in rat control, furnishing a supervisor to work with members of the health department staff to teach measures for the prevention of breeding rats and mosquitoes.

In the fall of 1943 a dengue epidemic in Hawaii resulted in the United States Public Health Service's sending to Hawaii a sanitary engineer, entomologist, administrator, and funds for augmenting the staff locally to carry out dengue control. To perpetuate this work, a Bureau of Mosquito Control was set up in the Health Department, which maintains inspection staffs in Honolulu and Hilo and has in readiness mobile crews and equipment to meet mosquito-borne hazards anywhere in the territory. In 1950 the *Megarhinus brevipalpis*, or cannibal mosquito, was imported from South Africa to assist in the control of mosquitoes in the forest areas where other measures fail. This mosquito, a nonbiting variety, eats the larvae of the night mosquito, which is not only pestiferous but also a potential carrier of filariasis and encephalitis.

Vital Statistics

In 1896, during the short existence of the Republic of Hawaii, the Legislature created the Bureau of Vital Statistics for the collection and registration of births, marriages, and deaths, a task which had been performed by the Department of Public Instruction since 1853* and earlier than that by the tax officers. The September 18, 1841, *Polynesian* printed the "Laws of the Hawaiian Islands"† which said:

"Let the tax officers see that the taxes are assessed in strict accordance with the requirements of the law * * * let them enumerate the people, male and female, together with the children who pay the yearly tax * * * let them take a yearly account of the deaths and births, by which it may be ascertained whether the people of the kingdom are really diminishing in numbers or not, and by that means the amount of taxes can be known."

Maternal and Child Health

Following the acceptance by the territorial legislature of the provisions of the Sheppard-Towner Act

of 1925, appropriating to states and territories federal aid for maternal and child health programs, the Bureau of Maternal and Infant Hygiene was organized in 1926. The purpose of the bureau, then as now, was to promote health in mothers, infants, and preschool children. A year later 68 health centers at which the Maternal and Infant Hygiene Bureau took an active part were in operation. Thirty-nine were conducted by the Department of Health and 29 by cooperating plantations. Conferences were held in the centers for well infants, and expectant mothers, who were given instruction in prenatal hygiene.

In 1937, Don Blanding, noted poet and artist and originator of Lei Day in Hawaii, designed the Child Health Day poster used throughout the territory with the slogan written by Mr. Blanding—

"Our nation's future, strength, and wealth,
Depends on this—our children's health."

First mention is made in 1941 of the acute shortage of beds for maternity patients, resulting from two conditions—one, the increasing percentage of hospital deliveries (76.55) and, two, the increasing number of people coming to Hawaii for military construction work. This shortage proved of such importance that in October of that year doctor-nurse teams, provided with the necessary supplies and equipment, furnished care for premature babies born at home on the island of Oahu who were unable to obtain hospitalization. These teams "in spite of blackout and other wartime conditions" were able to reach and care for the premature babies within an hour after a call was received.

Three demonstration projects were assigned to the territory by the Children's Bureau in 1947. One was a cooperative project of the Bureau of Maternal and Child Health and St. Francis Hospital for the care of premature babies. Funds were allotted from the Children's Bureau for three years to assist in maintaining the specially constructed and equipped nursery and for training in care of premature babies of three hospital nurses at mainland institutions.

A second project was that providing convalescent care for children with rheumatic fever at Children's Hospital. Again, federal funds were appropriated over a period of three years to assist in maintenance of the special ward for children with rheumatic heart disease.

The third project was set up by the Bureau of Crippled Children in a quonset hut on the grounds of the Kapahulu Health Center, where the necessary equipment and staff were provided to give treatment to children with cerebral palsy. For the first three years this program will be supported by federal funds from the Children's Bureau.

* Minutes of the Privy Council December 5, 1853.

† *Spectator*, July 1839. Laws dated June 7, 1839, are printed in a pamphlet of duodecimo form containing 24 pages. They were written by a graduate of the seminary at the direction of the King, but without any definite instructions as to what he should write.

Local Health Services

Among the earliest health services offered to islands other than Oahu was that given by "traveling" government physicians who were subsidized by the Board of Health. Mention is made of these representatives of the board in their second published report in 1868, although it is thought that they had been established some years previous to that by the King. This report—made during the fifth year of the reign of Kamehameha V and ending with "May God Preserve the King"—speaks of the unsatisfactory situation regarding traveling physicians. It recommends that the Board of Health furnish them with medicines for the needy and with sufficient subsidies to enable the physicians to maintain offices in sparsely settled districts in order to place medical services within the reach of all people living there. In 1872, \$12,000 was appropriated for these subsidies, and by 1880, \$3,000 was spent on medicines to be distributed to the needy. In 1901, the government physicians were given the additional duties of registering births, deaths, and marriages, and of performing post-mortems in cases of unattended deaths.

Today

One hundred years after the establishment of the first board of health in Hawaii there are 19 bureaus* in the Territorial Department of Health providing supervisory and consultant service on a territorial basis and direct services to the city and county of Honolulu. Three county health departments also function as branches of the Territorial Department. A staff of more than 600 persons is now required to carry on the work of public health for Hawaii. The board of nine members appointed by the Governor continues to direct the policies of the department and to formulate health regulations, as it has done for the past century.

Some of the public health achievements called to the attention of the people during our centennial month were—a reduction in infant mortality rate from one death out of 10 live births in 1926 to one death out of 40 live births in 1949; from one maternal death out of 200 deliveries in 1926 to one maternal death out of 2,000 deliveries in 1949; an absence of typhoid deaths for three consecutive years, of diphtheria deaths for five, and of smallpox cases for 37 years.

Dr. Charles L. Wilbar, Jr., president of the 1950 Board of Health and Executive Officer of the Department of Health, in his talk at the Centennial Observance December 13, 1950, expressed the aims of the board

* Business, Personnel, Health Education, Health Statistics, Sanitary Engineering, Industrial Hygiene, Pure Food and Drugs, Rodent Control, Mosquito Control, Housing, Epidemiology, Laboratories, Tuberculosis, Venereal Diseases and Cancer Control, Mental Hygiene, Maternal and Child Health and Crippled Children, Nutrition, Hospitals and Settlement (for Hansen's disease), Public Health Nursing.

and staff concerning Hawaii's future health program. He said:

"We can look upon this celebration as a commencement—a commencement of much greater accomplishments in the field of preventing illness, prolonging life, and assuring maximum physical and mental well-being than has been true in the past century. * * * There is much that can be done with present-day scientific knowledge to reduce morbidity and mortality incidences. Beyond this, research in medical and other health subjects is advancing in rapid strides so that during the next century we can look forward to major improvements in our knowledge as to how to prevent and cure illness and maintain a healthful existence."

Asilomar Workshop on Field Training Held by Public Health Nurses

California's second workshop on the field training of public health nurses was held at Asilomar for three days beginning January 30th. Its accomplishments are expected to be useful, as were those of last year's workshop, to many participants who are concerned with the training of public health nurses.

Taking part in the institute were 103 nurses who represented nine county health departments, five city departments, three visiting nurse services, a combination agency (health department, school department and visiting nurse agency), five school departments, three universities and the State Department of Public Health. All of the local agencies represented either are now accepting public health nursing students for field instruction or will soon develop such programs.

A feature of this year's meeting was the participation of several public health nursing students who recently completed their field training. The fresh experience of these nurses proved very helpful to the Asilomar workshop's analysis and study of present practices in field instruction.

Following an introductory session, eight work groups considered specific problems in relation to field training. On the closing day, each group presented its report for consideration and general discussion. The reports related to the role of various agency personnel in connection with the student program, the inclusion of clinic experience in the student program, the student's case load, the planning of the orientation period, the kinds of student and field adviser conferences which are needed and other such pertinent problems.

Comments received from nurses who attended the 1950 workshop on field training indicate that the material has been widely used as a guide in planning student programs and indirectly has had a favorable influence on the supervision of nursing staffs.

Border Public Health Association Meets in Los Angeles April 4-6

The Ninth Annual Meeting of the United States-Mexico Border Public Health Association will be held in Los Angeles April 4th, 5th and 6th, with headquarters at the Hotel Alexandria, Fifth and Spring Streets. This year's program will emphasize the need for improved and coordinated public health services, particularly in the Border area, "during the present uncertain period of our history."

The association has membership from the states bordering the international line between this Country and Mexico. Dr. Luis Arriaga Velez, Health Officer, State of Chihuahua, now serves as president, with Dr. Wilton L. Halverson, California State Director of Public Health, serving as president-elect. Both members and friends of the association are invited to attend.

Trudeau School Announces Course

The Trudeau School of Tuberculosis, Saranac Lake, New York, announces its 37th annual session of a four weeks' course covering all aspects of pulmonary tuberculosis and certain phases of other chronic chest disease, including those of occupational origin. Registration for the session, which begins April 30th, is limited. Tuition is \$100. A few scholarships are available for those who can qualify.

Infant and Maternal Mortality California, 1949

Final resident infant and maternal mortality rates again reached new lows in California in 1949, according to completed tabulations of the Bureau of Records and Statistics. The resident infant mortality rate dropped from 28.6 infant deaths per 1,000 live births in 1948 to 26.8 per 1,000 in 1949, and the resident maternal mortality rate from 0.9 per 1,000 live births in 1948 to 0.7 in 1949. The range of the infant mortality rates in the 31 counties with 1,000 or more live births in 1949 was from 18.2 in Humboldt County to 53.3 in Imperial County. (The rank order of rates is shown in Table 2.) In the preceding year, 1948, the range spread from 13.0 in Marin County to 56.2 in Imperial County for a total of 30 counties with 1,000 or more live births.

In 1949, 19 counties had infant mortality rates above the state total. These counties were largely in the San Joaquin Valley, Sacramento Valley, Central Coast and the more rural areas of Southern California. The greater metropolitan areas, Los Angeles, San Francisco and San Diego, together with the North Coast areas had lower rates than the state as a whole.

Almost two-thirds of the resident live births were in these areas.

The decrease in maternal mortality from a rate of 0.9 maternal death per 1,000 live births in 1948 to 0.7 per 1,000 in 1949 indicates some improvement in conditions pertaining to maternal health. Numerically the decrease from 207 to 163 would seem even more encouraging; however, deaths from preventable causes still occur.

**Table 1. Live Births, Infant and Maternal Mortality
California Counties, 1949**
(By place of residence)

County	Live births	Infant mortality		Maternal mortality	
		Number	Rate	Number	Rate
California, total...	244,905	6,571	26.8	163	0.7
Alameda.....	17,501	422	24.1	11	0.6
Alpine.....	3	1	"		
Amador.....	183	5	"		
Butte.....	1,473	53	36.0	1	0.7
Calaveras.....	185	2	"		
Colusa.....	263	7	"		
Contra Costa.....	8,232	190	23.8	6	0.7
Del Norte.....	198	6	"		
El Dorado.....	364	7	"		
Fresno.....	7,291	262	35.9	5	0.7
Glenn.....	356	4	"		
Humboldt.....	1,702	31	18.2		
Imperial.....	2,044	109	53.3	1	0.5
Inyo.....	261	9	"		
Kern.....	6,646	228	34.3	7	1.1
Kings.....	1,418	67	47.2		
Lassen.....	183	6	"		
Lassen.....	528	12	"		
Los Angeles.....	89,257	2,130	23.9	63	0.7
Madera.....	1,071	55	51.4	2	1.9
Marin.....	1,740	47	27.0	3	1.7
Mariposa.....	95	4	"		
Mendocino.....	881	27	"		
Merced.....	2,081	62	29.8	1	0.5
Modoc.....	219	5	"	1	"
Mono.....	26	1	"		
Monterey.....	3,486	125	35.8	2	0.6
Napa.....	779	17	"		
Nevada.....	384	13	"		
Orange.....	4,945	121	24.5	4	0.8
Placer.....	605	26	"	4	"
Plumas.....	354	17	"	1	"
Riverside.....	3,986	153	38.4	3	0.8
Sacramento.....	6,793	197	29.0	3	0.4
San Benito.....	351	14	"		
San Bernardino.....	6,478	211	32.6	6	0.9
San Diego.....	13,965	356	25.5	8	0.6
San Francisco.....	16,202	392	24.2	7	0.4
San Joaquin.....	4,975	121	24.3	3	0.6
San Luis Obispo.....	1,204	36	29.9		
San Mateo.....	5,478	104	19.0		
Santa Barbara.....	2,383	81	33.8		
Santa Clara.....	6,840	162	23.7	2	0.5
Santa Cruz.....	1,318	40	30.3		
Shasta.....	856	28	"		
Sierra.....	46	1	"		
Siskiyou.....	804	22	"	2	"
Solano.....	2,915	80	27.4	2	0.7
Sonoma.....	2,018	52	25.8		
Stanislaus.....	3,111	91	29.2	2	0.6
Sutter.....	638	15	"	2	"
Tehama.....	430	16	"	1	"
Trinity.....	101	1	"	2	"
Tulare.....	3,950	165	41.8	3	0.8
Tuolumne.....	253	7	"		
Ventura.....	2,929	91	31.1	4	1.4
Yolo.....	1,017	24	23.6	1	1.0
Yuba.....	680	18	"		
County not stated.....	118	16	"		

* Rate not calculated for less than 1,000 live births.

NOTE: Rates are per 1,000 live births.

**Table 2. Infant Mortality Rates by Rank Order of Rates
California Counties With 1,000 or More Live Births
in the Year, 1949**

(By place of residence)

County	Rate	Rank order	County	Rate	Rank order
California, total.....	26.8				
Humboldt.....	18.2	1	Stanislaus.....	29.2	16
San Mateo.....	19.0	2	Merced.....	29.8	17
Yolo.....	23.6	3	San Luis Obispo.....	29.9	18
Santa Clara.....	23.7	4	Santa Cruz.....	30.3	19
Contra Costa.....	23.8	5	Ventura.....	31.1	20
Los Angeles.....	23.9	6	San Bernardino.....	32.6	21
Alameda.....	24.1	7	Santa Barbara.....	33.8	22
San Francisco.....	24.2	8	Kern.....	34.3	23
San Joaquin.....	24.3	9	Monterey.....	35.8	24
Orange.....	24.5	10	Fresno.....	35.9	25
San Diego.....	25.5	11	Butte.....	36.0	26
Sonoma.....	25.8	12	Riverside.....	38.4	27
Marin.....	27.0	13	Tulare.....	41.8	28
Solano.....	27.4	14	Kings.....	47.2	29
Sacramento.....	29.0	15	Madera.....	51.4	30
			Imperial.....	53.3	31

NOTE: The infant mortality rate is the number of deaths under one year per 1,000 live births.

SOURCE: State of California, Department of Public Health, Vital Statistics Records.

Diphtheria Outbreak

A diphtheria outbreak in Eureka during January accounted for nine cases and one death, according to a report of M. W. Husband, Health Officer for Humboldt and Del Norte Counties. Four of the cases, including the fatality of a seven-year-old boy, were members of one family. Seven of the cases were in adults, ages 30 to 60. The majority of the cases either lived, worked, or had definite association with one district of the town.

This outbreak is an example of the changing pattern that diphtheria is showing in California. Cases are occurring in adults, chiefly in low socio-economic brackets, with occasional cases occurring in children who have not had adequate protection.

Kenfield Memorial Scholarship

In 1937 a sum of money was subscribed in memory of Miss Coralie N. Kenfield of San Francisco, a teacher well known throughout the United States for her high ideals and advanced methods in teaching lipreading. This money, placed in the Kenfield Memorial Fund, is administered by the American Hearing Society and provides an annual scholarship, which for 1951 is \$100. Applicants for this scholarship must be prospective teachers of lipreading to the hard of hearing. They must hold a college degree with a major in education, psychology, and/or speech. Those already teaching lipreading cannot be considered.

Applications must be filed between March 1 and May 1 with Miss Rose V. Feilbach, Chairman, Teachers' Committee, 1157 North Columbus Street, Arlington, Virginia.

Interdepartmental Program Developed For State Mental Institutions

California's interdepartmental program to promote good sanitation and preventive medicine in state mental institutions is now well under way, in line with the agreement reached last year by the State Departments of Mental Hygiene and Public Health.

This project was developed at the request of the Department of Mental Hygiene, with basic recommendations worked out in May, 1950, at an "Institute on Public Health in State Institutions" conducted by the two agencies at Asilomar. The institute was planned around the concept that a state institution is a community, and like any other community has intrinsic problems of preventive medicine and maintenance of good public health. Some of these problems are accentuated in an institution, however, and special solutions must be found. Periodically there have been outbreaks of enteric disease in state institutions. Other typical problems are fly and rat control, food storage, care and isolation of the tuberculous, dishwashing, and employee health.

Following the May, 1950, institute which brought public health and institutional staff together, a Public Health and Sanitation Committee was formed at each state mental hospital to plan and coordinate its local program. Working with these committees—in consultations, surveys, conferences, inspections and demonstrations—are personnel from this department's Division of Environmental Sanitation and Bureau of Acute Communicable Diseases. Local health department personnel are also participating in committees and other activities in the localities affected.

Progress already made in this program includes the completion at all mental institutions of food handler training course, and of preliminary surveys to evaluate general sanitation and health problems. Detailed surveys of food sanitation practices are also being carried on at every institution. Upon completion of each survey the findings are discussed with the institution's Public Health and Sanitation Committee. A written report is then submitted to the local superintendent and to the director of the Department of Mental Hygiene.

California Sewerage Programs Studied by New Jersey Executive

Joint construction and operation of sewerage systems by several communities is a modern, progressive plan which has become increasingly familiar in California. That this cooperative technique is attracting favorable attention outside the State was evidenced last month by a visit from Mr. H. M. Adams, an executive of the Johnson and Johnson Company of New

Jersey and representative of the Raritan Valley Sewerage Authority.

Mr. Adams came to California for knowledge which can be utilized by the Raritan Authority in serving 29 municipalities and 15 major industries in his state through a planned system of trunk sewers, sewage treatment works and a joint outfall into Raritan Bay.

In company with the Chief of the Bureau of Sanitary Engineering, Mr. Adams visited officials and engineers who participated in the planning, design and construction of intercepting sewers and sewage treatment works for the East Bay Municipal Utility District's Special District No. 1. Following a review of other projects in the San Francisco Bay area, he visited the Los Angeles area to study the joint programs of Los Angeles County Sanitation Districts and the progress made by metropolitan Los Angeles in this field.

Communicable Diseases in 1950

The Public Health Service reports that three diseases for which intensive preventive or public health measures are available and are widely used, namely diphtheria, smallpox, and the typhoid-paratyphoid group, were reported in smaller numbers in 1950 as compared with 1949 and the five-year median. California had 268 reported cases of diphtheria in 1950 as compared with 457 in 1949. No cases of smallpox were reported either year.

State and national figures for these three diseases for 1950, 1940 and 1930, showing the downward trends, are recorded as follows:

Disease	1950		1940		1930	
	U. S.	Cal.	U. S.	Cal.	U. S.	Cal.
Diphtheria	6,035	268	15,536	893	66,573	3,071
Smallpox	34	0	2,793	105	48,907	3,137
Typhoid and paratyphoid	3,424	117	9,809	352	27,201	786

Whooping cough has shown no such comparable decreases in numbers. For California there were 6,613 cases reported in 1950 as compared with 4,475 in 1949, 15,824 cases in 1940, and 7,993 in 1930. The national totals were 118,797 in 1950, 183,866 in 1940, and 116,914 in 1930.

Nationally, measles, poliomyelitis, Rocky Mountain spotted fever, scarlet fever, and tularemia were reported in fewer numbers in 1950 as compared with 1949. The same was true in California, except for scarlet fever, which showed an increase from 3,536 cases in 1949 to 4,720 in 1950.

Nationally, there was an increase in the total number of influenza cases, but California's total dropped from 777 in 1949 to 471 in 1950. While the number of

California Morbidity Reports Reportable Diseases—Civilian Cases

Total Cases for January, 1951, 1950, 1949, and
Five-year Median (1946-1950)

Reportable diseases	Current month			
	January			
	1951	1950	1949	5-year median 1946-1950
Amebiasis	59	19	32	19
Anthrax	4	2	6	19
Botulism	5	8	6	19
Brucellosis (undulant fever)	41	25	42	34
Chancroid	4,598	3,102	4,470	4,045
Chickenpox	5	4	6	4
Cholera	1	1	1	1
Coccidioidomycosis, disseminated	5	4	6	4
Conjunctivitis, acute infectious of the newborn	1	1	1	1
Dengue	11	11	2	11
Diarrhea of the newborn	28	45	43	41
Diphtheria	5	6	3	3
Encephalitis, infectious	132	190	193	178
Epilepsy	3	13	3	13
Food poisoning	412	203	630	230
German measles	1,749	1,535	1,952	2,341
Gonococcus infection	1	2	2	2
Granuloma inguinale	24	34	21	31
Hepatitis, infectious	64	60	107	107
Influenza, epidemic	13	8	9	19
Leprosy	2	2	3	6
Leptospirosis (Weil's disease)	13	8	9	19
Lymphogranuloma venereum	3,022	718	3,052	2,406
Malaria	38	34	27	49
Measles	2,144	3,502	3,545	2,406
Meningitis, meningococcal	256	518	228	517
Mumps	201	177	196	230
Pertussis	183	91	189	79
Plague	1	2	20	33
Pneumonia, infectious	9	2	20	33
Poliomyelitis, acute anterior	32	27	43	64
Rabies, animal	36	10	3	6
Rabies, human	71	41	30	34
Relapsing fever	32	27	43	64
Rheumatic fever, acute	36	10	3	6
Rocky Mountain spotted fever	71	41	30	34
Salmonella infections*	1,019	521	505	521
Shigella infections (bacillary dysentery)	968	744	1,408	1,408
Smallpox	1	2	2	2
Streptococcal infections: respiratory including scarlet fever	2	2	2	2
Syphilis	1	1	1	1
Tetanus	783	595	620	620
Trachoma	47	36	34	36
Trichinosis	6	6	9	9
Tuberculosis: Pulmonary	6	6	9	9
Other forms	6	6	9	9
Tularemia	6	6	9	9
Typhoid fever	6	6	9	9
Typhus fever	6	6	9	9
Yellow fever	6	6	9	9

* All types of salmonella infections now reportable. Prior to January 1, 1950, only A, B and C types were reportable; hence five-year median not entirely comparable.

reported cases of animal rabies increased for the Nation in 1950 as compared with 1949, in California the total dropped from 152 reported cases in 1949 to 110 in 1950. California reported no human cases of rabies last year, but had 1 in 1949.

Infectious encephalitis increased sharply in California last year, which, with 336 reported cases, was the highest year on record. Only 74 cases were reported in 1949.

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